METHOD OF DETERMINING THE TOPOLOGY OF
A NETWORK OF OBJECTS

FIELD OF INVENTION:

[0001]   This invention relates to a method of determining the topology of a network of objects, such as the physical topology of a network of data communications devices. This is a divisional of U.S. application 08/749,671 filed November 15, 1996 which is a continuation-in-part application of U.S. application 08/599,310 filed February 9, 1996 which is a continuation-in-part of U.S. application 08/558,729 filed November 16, 1995.

BACKGROUND TO THE INVENTION:

[0002]   Operators of many data communications networks are typically ignorant of the exact topology of the networks. The operators need to know the exact topology in order to properly manage the networks, for example, for the accurate diagnosis and correction of faults.

[0003]   Network managers that do know the very recent topology of their network do so by one of two methods: an administrative method and an approximate AI (artificial intelligence) method.

[0004]   Administrative methods require an entirely up to date record of the installation, removal, change in location and connectivity of every network device. Every such change in topology must be logged. These updates are periodically applied to a data base which the network operators use to display or examine the network topology. However, in most such systems the actual topology information made available to the operators is usually that of the previous day or previous days, because of the time lag in entering the updates. This method has the advantage that a network device discovery program need not be run to find out what devices exist in the network.

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